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EXAMINER	
POKRZYWA, JOSEPH R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/196,689	Applicant(s) KULKARNI, MANISH
	Examiner Joseph R. Pokrzywa	Art Unit 2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☒ Interview Summary (PTO-413) Paper No(s). *19* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Prosecution Application

1. The request filed on March 31, 2003 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/196,689 is acceptable and a CPA has been established. An action on the CPA follows.

Response to Amendment

2. Applicant's amendment received on February 6, 2003 has been entered and made of record. Currently, **claims 1-35** are pending.

Response to Arguments

3. Applicant's arguments filed February 6, 2003, which were addressed in the Office action dated March 3, 2003, have been fully considered but they are not persuasive. For completeness, the response to the arguments found in the Office action dated March 3, 2003, are repeated below in their entirety.

4. In response to applicant's arguments regarding the rejection under 35 U.S.C.102(e) as being anticipated by Wan *et al.* (U.S. Patent Number 5,721,572, hereinafter Wan'572), of **claim 1**, which states on pages 16 and 17, that Wan'572 does not teach of generating a reverse model look-up table, as recited in the claims. The examiner disagrees with this statement. While applicant is correct in their assertions that Wan'572 teaches of generating gamut boundary descriptors, Wan'572 further describes that the generated gamut boundary descriptors are used to

generate a reverse model look-up table. As seen in Fig. 3, an ILUT 40 is derived using the gamut descriptor 38 and the forward LUT 36. Currently, claim 1 recites "[a] method for deriving a reverse model look-up table ..., the method comprising the following steps to determine an entry in the reverse model look-up table for a device independent target color...". Thus the process that follows in the claim is used to determine a reverse model look-up table. This is exactly what Wan'572 is doing. Wan'572 does determine gamut descriptors, as argued by applicant, but then Wan'572 further states that the gamut descriptors are used to determine an entry in the reverse model look-up table for a device independent target color, as currently required by the claim. On page 18, applicant argues that cited portions of Wan'572 are seen to describe the tables and techniques used to generate gamut boundary descriptors, and not for the generation of a reverse model look-up table. The examiner agrees that the cited portions of Wan'572 do describe the development of gamut boundary descriptors, as argued by applicant. However, as read in column 4, lines 15 through 17, Wan states "[t]he inverse look-up table 40 is created using the look-up table 36 and a gamut descriptor 38 for the second device 24." This section shows that the gamut descriptors are used *for generating the ILUT.* Wan'572 teaches that the derivation of an ILUT requires the derivation of a gamut descriptor first, thereby the derivation of gamut descriptors is needed as a "method for deriving a reverse model look-up table", according to techniques used by Wan'572.

5. Further, applicant continues on pages18 and 19, that none of the tables in the cited portions of Wan'572 teach of a forward model look-up table that is searched using a binary search to locate a cell of the forward model look-up table that contains the device independent target color. Wan'572 teaches of performing a binary search of the forward model look-up table

to locate a cell (unit vector) that contains the device independent color in column 6, lines 23 through 63, column 7, lines 18 through 23, and column 9, lines 9 through 16, wherein the forward model look-up table is first split into triangles, as read in column 7, lines 18 through 23. Next, the triangles split from the LUT are subsequently searched, as read in column 9, lines 9 through 16. With this, one of ordinary skill in the art can interpret Wan'572 as effectively using a binary search of the forward model look-up table to locate a cell, as required in the claim.

6. In response to applicant's arguments on page 20, which state that Wan'572 is not seen to teach or suggest interpolating entries at grid points of the forward model look-up table that define the cell located by the binary search of the forward model look-up table to obtain device dependent colors that correspond to the device independent target color. The examiner notes the current claim does not include the limitation particularly specifying that the cell is "located by the binary search of the forward model look-up table". Further, as read in column 8, lines 24 through 49, entries from the forward model look-up table (being the entries or boundary points obtained from the LUT) are interpolated at grid points that define the cell so as to obtain device dependent colors corresponding to the device independent target color.

7. Therefore, the rejection of ***claim 1***, as well as ***claims 3, 5-8, 10, 12-15, 17, 19-22, 24, and 26-30*** for the same reasons discussed above, under 35 U.S.C. 102(e), being anticipated by Wan *et al.* (U.S. Patent Number 5,721,572), is maintained. Further, for the same reasons discussed above, the rejection of ***claims 2, 9, 16, and 23***, under 35 U.S.C. 103(a), as being unpatentable over Wan *et al.* (U.S. Patent Number 5,721,572) in view of Spaulding *et al.* (U.S. Patent Number 5,553,199), and the rejection of ***claims 4,11, 18, and 25***, under 35 U.S.C. 103(a), as being

unpatentable over Wan *et al.* (U.S. Patent Number 5,721,572) in view of Wan *et al.* (U.S. Patent Number 5,625,378), are also maintained.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1, 3, 5 through 8, 10, 12 through 15, 17, 19 through 22, 24, and 26 through 30** are rejected under 35 U.S.C. 102(e) as being anticipated by Wan *et al.* (U.S. Patent Number 5,721,572, cited in the Office action dated 4/24/02).

Regarding ***claim 1***, Wan discloses a method for deriving a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 3, lines 39 through 56), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout of corresponding device dependent color components (column 3, line 63 through column 4, line 28), wherein the forward model and the reverse model look-up tables both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (see Figs. 1, 2, and 7, and column 3, lines 39 through 62), the method comprising the following steps to determine an entry in the reverse model look-up table for a device independent target color (column 3, lines 39 through 56), performing a binary search of the forward model look-up table to locate a cell that contains the device

independent color (column 7, lines 24 through column 24 through column 8, line 37, and column 9, lines 9 through 16), interpolating entries from the forward model look-up table at grid points that define the cell so as to obtain device dependent colors corresponding to the device independent target color (column 5, lines 43 through 67, and column 8, lines 38 through 60), and storing the device dependent color at the grid point of the reverse model look-up table for the device independent target color (column 3, lines 39 through 56).

Regarding ***claim 3***, Wan discloses the method discussed above in claim 1, and further teaches that binary searching step comprises dividing the device independent color space into multiple regions defined by device independent colors corresponding to small variations from the starting color in device dependent color space (column 6, lines 58 through column 7, line 30), determining which of the multiple regions contains the device independent target color (column 7, lines 32 through 50), and updating the starting color value based on which region contains the device independent target color (column 7, line 51 through column 8, line 41).

Regarding ***claim 5***, Wan discloses the method discussed above in claim 1, and further teaches that the device independent color space is CIEXYZ or CIELAB color space, and wherein the device dependent color space is CMY or CMYK color space (column 1, lines 32 through 58).

Regarding ***claim 6***, Wan discloses the method discussed above in claim 1, and further teaches that the forward model look-up table is derived by printing color patches corresponding to predefined colors in device dependent color space, and measuring the colors of the patches in device independent color space (column 1, line 32 through column 2, line 21).

Regarding ***claim*** *7*, Wan discloses the method discussed above in claim 1, and further teaches that the predefined colors are in CMY or CMYK space, and the colors are measured in CIEXYZ or CIELAB space (column 1, line 32 through column 2, line 21).

Regarding ***claim 8***, Wan discloses an apparatus for deriving a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 3, lines 39 through 56), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout of corresponding device dependent color components (column 3, line 63 through column 4, line 28), wherein the forward model and the reverse model look-up tables both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (see Figs. 1, 2, and 7, and column 3, lines 39 through 62), to determine an entry in the reverse model look-up table for a device independent target color (column 3, lines 39 through 56), the apparatus comprises means for performing a binary search of the forward model look-up table to locate a cell that contains the device independent color (column 7, lines 24 through column 24 through column 8, line 37, and column 9, lines 9 through 16), means for interpolating entries from the forward model look-up table at grid points that define the cell so as to obtain device dependent colors corresponding to the device independent target color (column 5, lines 43 through 67, and column 8, lines 38 through 60), and means for storing the device dependent color at the grid point of the reverse model look-up table for the device independent target color (column 3, lines 39 through 56).

Regarding ***claim 10***, Wan discloses the apparatus discussed above in claim 8, and further teaches that the search performing means comprises means for performing iterated steps starting from a starting color value in device dependent color space (column 6, lines 58 through column

8, line 41), the iterated steps comprising dividing the device independent color space into multiple regions defined by device independent colors corresponding to small variations from the starting color in device dependent color space (column 6, lines 58 through column 7, line 30), determining which of the multiple regions contains the device independent target color (column 7, lines 32 through 50), and updating the starting color value based on which region contains the device independent target color (column 7, line 51 through column 8, line 41).

Regarding ***claim 12***, Wan discloses the apparatus discussed above in claim 8, and further teaches that the device independent color space is CIEXYZ or CIELAB color space, and wherein the device dependent color space is CMY or CMYK color space (column 1, lines 32 through 58).

Regarding ***claim 13***, Wan discloses the apparatus discussed above in claim 8, and further teaches that the forward model look-up table is derived by printing color patches corresponding to predefined colors in device dependent color space, and measuring the colors of the patches in device independent color space (column 1, line 32 through column 2, line 21).

Regarding ***claim 14***, Wan discloses the apparatus discussed above in claim 8, and further teaches that the predefined colors are in CMY or CMYK space, and the colors are measured in CIEXYZ or CIELAB space (column 1, line 32 through column 2, line 21).

Regarding ***claim 15***, Wan discloses computer-executable process steps stored on a computer-readable medium (inherent in computer 20, being a Sun Workstation or Apple Macintosh, as read in column 3, line 63 through column 4, line 32), with the process steps to derive a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 3, lines 39 through 56), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout

of corresponding device dependent color components (column 3, line 63 through column 4, line 28), wherein the forward model and the reverse model look-up tables both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (see Figs. 1, 2, and 7, and column 3, lines 39 through 62), the process steps comprising the following codes to determine an entry in the reverse model look-up table for a device independent target color (column 3, lines 39 through 56), code to perform a binary search of the forward model look-up table to locate a cell that contains the device independent color (column 7, lines 24 through column 24 through column 8, line 37, and column 9, lines 9 through 16), code to interpolate entries from the forward model look-up table at grid points that define the cell so as to obtain device dependent colors corresponding to the device independent target color (column 5, lines 43 through 67, and column 8, lines 38 through 60), and code to store the device dependent color at the grid point of the reverse model look-up table for the device independent target color (column 3, lines 39 through 56).

Regarding *claim 17*, Wan discloses the process steps discussed above in claim 15, and further teaches that the code to perform a binary search comprises code to perform iterated steps starting from a starting color value in device dependent color space (column 6, lines 58 through column 8, line 41), the process steps comprising dividing the device independent color space into multiple regions defined by device independent colors corresponding to small variations from the starting color in device dependent color space (column 6, lines 58 through column 7, line 30), determining which of the multiple regions contains the device independent target color (column 7, lines 32 through 50), and updating the starting color value based on which region contains the device independent target color (column 7, line 51 through column 8, line 41).

Regarding ***claim 19***, Wan discloses the process steps discussed above in claim 15, and further teaches that the device independent color space is CIEXYZ or CIELAB color space, and wherein the device dependent color space is CMY or CMYK color space (column 1, lines 32 through 58).

Regarding ***claim 20***, Wan discloses the process steps discussed above in claim 15, and further teaches that the forward model look-up table is derived by printing color patches corresponding to predefined colors in device dependent color space, and measuring the colors of the patches in device independent color space (column 1, line 32 through column 2, line 21).

Regarding ***claim 21***, Wan discloses the process steps discussed above in claim 15, and further teaches that the predefined colors are in CMY or CMYK space, and the colors are measured in CIEXYZ or CIELAB space (column 1, line 32 through column 2, line 21).

Regarding ***claim 22***, Wan discloses a computer-readable medium (inherent in computer 20, being a Sun Workstation or Apple Macintosh, as read in column 3, line 63 through column 4, line 32) which stores computer-executable process steps, with the steps to derive a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 3, lines 39 through 56), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout of corresponding device dependent color components (column 3, line 63 through column 4, line 28), wherein the forward model and the reverse model look-up tables both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (see Figs. 1, 2, and 7, and column 3, lines 39 through 62), the computer-executable process steps comprising the following steps to determine an entry in the reverse model look-up table for a device independent

target color (column 3, lines 39 through 56), a step to perform a binary search of the forward model look-up table to locate a cell that contains the device independent color (column 7, lines 24 through column 24 through column 8, line 37, and column 9, lines 9 through 16), a step to interpolate entries from the forward model look-up table at grid points that define the cell so as to obtain device dependent colors corresponding to the device independent target color (column 5, lines 43 through 67, and column 8, lines 38 through 60), and a step to store the device dependent color at the grid point of the reverse model look-up table for the device independent target color (column 3, lines 39 through 56).

Regarding ***claim 24***, Wan discloses the medium discussed above in claim 22, and further teaches that the search performing step comprises iterated steps starting from a starting color value in device dependent color space (column 6, lines 58 through column 8, line 41), the process steps comprising dividing the device independent color space into multiple regions defined by device independent colors corresponding to small variations from the starting color in device dependent color space (column 6, lines 58 through column 7, line 30), determining which of the multiple regions contains the device independent target color (column 7, lines 32 through 50), and updating the starting color value based on which region contains the device independent target color (column 7, line 51 through column 8, line 41).

Regarding ***claim 26***, Wan discloses the medium discussed above in claim 22, and further teaches that the device independent color space is CIEXYZ or CIELAB color space, and wherein the device dependent color space is CMY or CMYK color space (column 1, lines 32 through 58).

Regarding ***claim 27***, Wan discloses the medium discussed above in claim 22, and further teaches that the forward model look-up table is derived by printing color patches corresponding

to predefined colors in device dependent color space, and measuring the colors of the patches in device independent color space (column 1, line 32 through column 2, line 21).

Regarding ***claim 28***, Wan discloses the medium discussed above in claim 22, and further teaches that the predefined colors are in CMY or CMYK space, and the colors are measured in CIEXYZ or CIELAB space (column 1, line 32 through column 2, line 21).

Regarding ***claim 29***, Wan discloses an apparatus for deriving a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 3, lines 39 through 56), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout of corresponding device dependent color components (column 3, line 63 through column 4, line 28), wherein the forward model and the reverse model look-up tables both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (see Figs. 1, 2, and 7, and column 3, lines 39 through 62), the apparatus (computer 20, such as a Sun Workstation or Apple Macintosh, as read in column 3, line 63 through column 4, line 32) comprises a memory including region for storing the forward model look-up table, a region for storing the reverse model look-up table (see Fig. 3, LUT 36 and ILUT 40), and a region for storing executable process steps (being inherent in computer 20), wherein the executable process steps include the following steps to determine an entry in the reverse model look-up table for a device independent target color (column 3, lines 39 through 56), performing a binary search of the forward model look-up table to locate a cell that contains the device independent color (column 7, lines 24 through column 24 through column 8, line 37, and column 9, lines 9 through 16), interpolating entries from the forward model look-up table at grid points that define the cell so as to obtain device dependent colors corresponding to

the device independent target color (column 5, lines 43 through 67, and column 8, lines 38 through 60), and storing the device dependent color at the grid point of the reverse model look-up table for the device independent target color (column 3, lines 39 through 56).

Regarding ***claim 30***, Wan discloses the apparatus discussed above in claim 29, and further teaches that the binary search performing step comprises iterated steps starting from a starting color value in device dependent color space (column 6, lines 58 through column 8, line 41), the iterated steps comprising dividing the device independent color space into multiple regions defined by device independent colors corresponding to small variations from the starting color in device dependent color space (column 6, lines 58 through column 7, line 30), determining which of the multiple regions contains the device independent target color (column 7, lines 32 through 50), and updating the starting color value based on which region contains the device independent target color (column 7, line 51 through column 8, line 41).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. **Claims 2, 9, 16, and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wan *et al.* (U.S. Patent Number 5,721,572, cited in the Office action dated 4/24/02) in view of Spaulding *et al.* (U.S. Patent Number 5,553,199, cited in the Office action dated 4/24/02).

Regarding ***claims 2. 9, 16, and 23***, Wan discloses the method, apparatus, process steps, and medium discussed above in claims 1, 8, 15, and 22, respectively, but fails to specifically teach of tetrahedral interpolation. Spaulding discloses a system for deriving a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 3, lines 50 through 52, and column 7, lines 39 through 50), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout of corresponding device dependent color components, wherein the forward model and the reverse model look-up tables both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (see Figs. 1 through 5, and column 4, lines 36 through 49). Spaulding further teaches of interpolating that comprises tetrahedral interpolation (column 5, lines 34 through 50). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include Spaulding's teachings in Wan's system. Wan's system would easily be modified with the teachings of Spaulding, as tetrahedral

interpolation is widely known and used throughout the art, as recognized by Spaulding, and since the systems share cumulative features, being additive in nature.

12. **Claims 4, 11, 18, and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wan *et al.* (U.S. Patent Number 5,721,572, hereinafter Wan'572, cited in the Office action dated 4/24/02) in view of Wan *et al.* (U.S. Patent Number 5,625,378, hereinafter Wan'378, cited in the Office action dated 4/24/02).

Regarding ***claim 4, 11, 18, and 25***, Wan'572 discloses the method, apparatus, process steps, and medium discussed above in claims 3, 10, 17, and 24, respectively, and further teaches that the determining which of the multiple regions contains the device independent target color comprises obtaining dot products for each normal plane vector that defines the multiple regions with the vector that defines the difference between the target color corresponding to the starting color (column 7, line 40 through column 8, line 41), and determines which region contains the device independent target color (column 7, line 51 through column 8, line 8). However, Wan'572 fails to specifically teach of determining which region contains the device independent target color *in accordance with which of the dot products yields positive values and which yields negative values*.

Wan'378 discloses a system for deriving a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 4, lines 2 through 30), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout of corresponding device dependent color components (column 4, lines 4 through 16), wherein the forward model and the reverse model look-up tables

both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (see Figs. 2 and 3). Wan'378 further teaches of determining which of the multiple regions contains the device independent target color comprises obtaining dot products for each normal plane vector that defines the multiple regions with the vector that defines the difference between the target color corresponding to the starting color (column 1, line 63 through column 2, line 34, column 4, line 50 through column 5, line 42, and column 6, lines 38 through 48), and determining which region contains the device independent target color in accordance with which of the dot products yields positive values and which yields negative values (column 6, lines 37 through 60). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teachings of Wan'378 in the system of Wan'572. The system of Wan'572 would easily be modified with the teachings of Wan '378, as the systems share cumulative features, being additive in nature.

13. **Claims 31-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wan *et al.* (U.S. Patent Number 5,721,572, cited in the Office action dated 4/24/02) in view of Lin *et al.* (U.S. Patent Number 6,204,939, cited as being "Pertinent Prior Art" in the Office action dated 8/15/01).

Regarding ***claims 31. 32, 33, 34, and 35***, Wan discloses the method, apparatus, process steps, medium and apparatus discussed above in claims 1, 8, 15, 22, and 29, respectively, but does not specifically describe if the interpolating comprises interpolating entries from the forward model look-up table that interpolates device-dependent colors to obtain a device-dependent color corresponding to the device-independent target color. Lin discloses a method for

deriving a reverse model look-up table whose entries represent device dependent colors as a function of device independent colors (column 2, line 40 through column 3, line 35, and column 12, lines 32 through 67), based on a forward model look-up table whose entries represent device independent colors obtained in response to printout of corresponding device dependent color components (column 7, lines 4 through 50), wherein the forward model and the reverse model look-up tables both comprise a grid of cells in their respective color spaces with entries at each grid point of the grid (column 7, lines 4 through 50), the method comprising interpolating entries from the forward model look-up table at grid points that define the cell so as to obtain device dependent colors corresponding to the device independent target color (column 12, lines 32 through 47). Further, Lin teaches that the interpolating comprises interpolating entries from the forward model look-up table interpolates device-dependent colors to obtain a device-dependent color corresponding to the device-independent target color (column 12, lines 32 through 47). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include Lin's teachings in the system of Wan. Wan's system would easily be modified to include Lin's teachings, since the systems share cumulative features, being additive in nature.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe Pokrzywa whose telephone number is (703) 305-0146. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

J.R.P.

Joseph R. Pokrzywa
Examiner
Art Unit 2622

jrp
July 1, 2003

EDWARD COLES
SUPERVISORY PATENT EXAMINER
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